In the claims:

- 2. (original) The fusion protein of claim 1, wherein the IFN- α is IFN- α 2b.
- 3. (original) The fusion protein of claim 1, wherein the IFN- α is a consensus IFN.
- 4. (original) The fusion protein of claim 1, wherein the immunoglobulin heavy chain is a human Fcy1 heavy chain.
- 5. (original) The fusion protein of claim 1, wherein the immunoglobulin heavy chain has an amino acid sequence provided by SEQ ID NO:2.
- 6. (original) The fusion protein of claim 1, wherein the IFN- α is IFN- α 2b and the immunoglobulin heavy chain is a human Fcy1 heavy chain.
- 7. (original) The fusion protein of claim 1, wherein the linker has a sequence Gly-Gly-Gly-Gly-Gly-Gly-Gly-Gly-Gly-Ser (GS10; SEQ ID NO:28).
- 8. (original) The fusion protein of claim 1, wherein the linker has a sequence Gly-Gly-Gly-Gly-Ser-Gly-Gly-Gly-Gly-Gly-Gly-Ser (GS15; SEQ ID NO:29).

- 10. (original) The fusion protein of claim 1, wherein the fusion protein is a disulfide-linked homodimer.
- 12. (currently amended) The fusion protein of claim 1<u>1</u>, wherein the fusion protein is a disulfide-linked homodimer.
- 13. (original) A method for systemic delivery of interferon-alpha (IFN-α), comprising: administering an effective amount of an aerosol of a fusion protein of claim 1 to lung such that a central lung zone/peripheral lung zone deposition ratio (C/P ratio) is at least 0.7.

Claims 14-17 (canceled)

18. (original) A method for systemic delivery of interferon-alpha 2b (IFN-α2b), comprising: administering an effective amount of an aerosol of a fusion protein of claim 11 to lung such that a central lung zone/peripheral lung zone deposition ratio (C/P ratio) is at least 0.7.

Claims 19-22 (canceled)

23. (original) A method for systemic delivery of interferon-alpha (IFN- α), comprising:

administering an effective amount of an aerosol of a fusion protein of claim 1 to lung, wherein particles in the aerosol have a mass median aerodynamic diameter (MMAD) of at least 3 micrometers (μ m).

Claims 24-27 (canceled)

28. (original) A method for systemic delivery of interferon-alpha 2b (IFN-α2b), comprising: administering an effective amount of an aerosol of a fusion protein of claim 11 to lung, wherein particles in the aerosol have a mass median aerodynamic diameter (MMAD) of at least 3 micrometers (μm).

Claims 29-32 (canceled)

33. (original) An aerosol delivery system, comprising a container, an aerosol generator connected to the container, and a fusion protein of claim 1 disposed within the container, wherein the aerosol generator is constructed and arranged to generate an aerosol of the fusion protein having particles with a MMAD of at least 3 µm.

Claims 34-39 (canceled)

40. (original) An aerosol delivery system, comprising a container, an aerosol generator connected to the container, and a fusion protein of claim 11 disposed within the container, wherein the aerosol generator is constructed and arranged to generate an aerosol of the fusion protein having particles with a MMAD of at least 3 μm.

Claims 41-46 (canceled)

47. (original) A method of treating an interferon-alpha (IFN- α)-sensitive disease in a subject, comprising

administering to a subject having an IFN- α -sensitive disease an aerosol of the fusion

protein of claim 1, in an effective amount to treat the IFN- α -sensitive disease.

Claim 48 (canceled)

49. (original) A method of treating an interferon-alpha 2b (IFN- α 2b)-sensitive disease in a subject, comprising

administering to a subject having an IFN- α 2b-sensitive disease an aerosol of the fusion protein of claim 11, in an effective amount to treat the IFN- α 2b-sensitive disease.

Claim 50 (canceled)